

**CLAIMS:**

1. A method for the continuous gravimetric metering of flowing materials for burner systems, with the instantaneous mass flow being determined and the metering occurring with a metering device, characterized in that  
the type of each flowing material is determined, the known individual calorific value from the type of each flowing material is determined and the instantaneous calorific value of the flowing materials is determined from the determination of the mass flow and the output from the metering device (8, 108) is regulated in adjustment to the set-point conveying rate depending on the instantaneous calorific value.
2. A method according to claim 1, characterized in that the determination of type of flowing material is carried out by way of NIR spectroscopy.
3. A method according to claim 1 or 2, characterized in that the flowing materials are plastic materials, especially plastic from recycling.
4. A method according to one of the preceding claims, characterized in that the output of the metering device (8, 108) is regulated by taking into account the distance between metering device (8, 108) and burner system (40).
5. A method according to one of the preceding claims, characterized in that the output of the metering device (8, 108) is controlled or regulated by changing the speed of the metering device (8, 108).
6. A method according to one of the preceding claims, characterized in that the output of the metering device (8) is regulated in the case of pneumatic conveyance by changing the air quantity and/or air speed.
7. An apparatus for the continuous gravimetric metering of flowing materials for burner systems, with the instantaneous mass flow being determined and with the flowing materials being metered by means of a metering device (8, 108), characterized in that  
there are provided a material recognition system (20, 120) for determining any kind of flowing material, a computer unit (30, 130) for determining the instantaneous calorific value of the flowing materials, and a metering control unit (10, 110) with which the output of the metering device (8, 108) is adjusted to the set-point conveying rate depending on the instantaneous calorific value.

8. An apparatus according to claim 7, characterized in that the material recognition system (20, 120) comprises a contactless material sensor (22), especially a microwave sensor, an X-ray sensor or NIR spectroscopic sensor, and a radiation source (23, 24) with which the flowing material can be irradiated with a radiation to which the material sensor is sensitive.
9. An apparatus according to claim 8, characterized in that the material sensor (22) is an NIR spectroscopic sensor and the radiation source (23, 24) emits light in the near-infrared range, especially that the radiation source is a halogen lamp.
10. An apparatus according to one of the claims 7 to 9, characterized in that the material recognition system (20) is arranged directly before the metering device (8, 108).
11. An apparatus according to one of the claims 7 to 9, characterized in that the material recognition system (120) is arranged in a flow meter (104).
12. An apparatus according to claim 11, characterized in that the flow meter (104) is arranged on a band weigher or a Coriolis flow meter or is configured as a rotary metering weigher (8).
13. An apparatus according to one of the claims 7 to 12, characterized in that the flowing materials are plastic materials, especially plastic from recycling.
14. An apparatus according to one of the claims 7 to 13, characterized in that the burner system (40, 140) is a rotary kiln for cement production.
15. An apparatus according to one of the claims 11 or 12, characterized in that the metering device (8) and the flow meter (104) form a unit, especially a rotary metering weigher.